KNN2/KNN (Q9L10) 26% (5/19)

✓ **1. KNN is**

- (A) data-driven method
- (B) model-driven method
- (C) I do not know

✗ **2. The dependent variable of the classification is**

- (A) categorical
- (B) numeric
- (C) I do not know

✗ **3. KNN can be used for regression**

- (A) Yes
- (B) No
- (C) I do not know

✗ **4. In the case of KNN classification we use**

- (A) average of outcomes
- (B) majority voting scheme
- (C) I do not know

✗ **5. Which of these errors will increase constantly by increasing k?**

- (A) train error
- (B) test error
- (C) both
- (D) I do not know

✗ **6. This function can be used to perform KNN classificationin R**

- (A) knn()
- (B) k_nn()
- (C) knnreg()
- (D) knearneib()
- (E) I do not know

✗ 7. With the increase of k, the decision boundary will be

A simplified

B more complex

C I do not know

D unchanged

✗ 8. KNN algorithm is sensitive to outliers

A True

B False

C I do not know

✗ 9. KNN

A is a supervised learning algorithm.

B is an unsupervised learning algorithm.

C I do not know

✗ 10. In the case of small k we have

A overfitting

B underfitting

C it depends on the situation

D I do not know

✓ 11. Why do we need scaling in KNN?

A to avoid overfitting

B to avoid underfitting

C to have "equal" weights for variables

D I do not know

✓ 12. Let k = n, (n- number of observations), K-NN is same as

A random guessing

B everything will be classified as the most probable class (in total)

C everything will be classified as the least probable class (in total)

D I do not know

✗ 13. This function can be used to perform K-NN regression in R

A knn.reg

B knnforreg

C regknn

D knnforregression

E I do not know

✓ 14. Do you need to worry about scaling with one explanatory variable?

A No

B Yes

C I do not know

✗ 15. n - the number of observation,
m - the number of explanatory variables

When n=k, m=1, the decision boundary for regression is

A a line

B a stepwise constant function

C a stepwise quadratic function

D I do not know

✗ 16. Which of these algorithms can be used to fill the missing values

A KNN for regression

B KNN for classification

C both

D I do not know

✗ 17. Which one is better: KNN regression or Linear regression ?

A KNN outperform LR if the parametric form that has been selected is close to the true form of f

B LR outperform KNN if the parametric form that has been selected is close to the true form of f

C KNN will always outperform the LR

D I do not know

✗ 18. Which one is the Disadvantage of KNN?

- A required assumptions
- B cannot be applied for regression
- C difficult to perform
- D the problem of high dimensional data
- E I do not know

✓ 19. The best k for train set equals to

- A 1
- B 2
- C 0
- D I do not know

⊘ 20. What is the Parzen window